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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,390	11/19/2001	Jorg Sauer	032301.547691	8279

441 7590 05/24/2004

SMITH, GAMBRELL & RUSSELL, LLP
1850 M STREET, N.W., SUITE 800
WASHINGTON, DC 20036

EXAMINER	
ZUCKER, PAUL A	

ART UNIT	PAPER NUMBER
1621	

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/988,390	SAUER ET AL.	
	Examiner	Art Unit	
	Paul A. Zucker	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 17-35 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 17,19,20,22,23,25,26 and 28-35 is/are rejected.

7)☒ Claim(s) 18,21,24 and 27 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/081,568.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2/11/04,11/19/01.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Applicants should amend the first sentence of the specification to reflect the issue of the parent application 09/081,568 as US 6,337,300. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 30-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 30, as written, is incomprehensible. There appears to be missing text between lines 4 and 5 of claim 30. Claim 30 and its dependents are therefore rendered indefinite.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 17, 19, 20, 22, 23, 25, 26 and 28-35 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the preparation and use of catalysts based upon cobalt as the catalytic metal, does not reasonably provide enablement for the use of any arbitrary metal (including, for example,

mercury) as a catalyst. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue." These factors include, but are not limited to:

a. the breadth of the claims: In the instant case the claims are extremely broad encompassing the hydrogenation, dehydrogenation and hydrogenolysis of any compound (inorganic or organic) employing a shaped metal fixed bed catalyst of any catalyst metal;

b. the nature of the invention: The instantly claimed invention involves the production and use of a catalyst metal for a specific class of reactions.

c. the state of the prior art: the state of the prior art is generally considered high but would not allow one to predict in advance, based on Applicants' disclosure, which of the variety of possible catalyst metals could be used to successfully hydrogenate, dehydrogenate or hydrogenolyze any arbitrarily selected compound. This is especially true since it is well understood by one of ordinary skill in the art that catalysts have unpredictable behaviors that vary in ways that, frequently, cannot readily be rationalized.

e. the amount of direction provided by the inventor: The inventors provide direction for the production of a Raney-type cobalt catalyst. This can

reasonably be extended to other well-known metals employed in Raney-type catalysts such as copper, nickel and iron. It is, however, not reasonable to extend this teaching further to other metals since no direction is provided for any other metal. One of ordinary skill in the art could not have a reasonable expectation for success in the use of metals that are not typically used in Raney-type catalysts.

f. the existence of working examples: The only working examples provided are directed to the production and use of cobalt catalysts.

Based upon the analysis above, the Examiner concludes that, because of the unpredictability of the catalytic arts, undue experimentation is required to make and use the claimed invention.

Claim Objections

4. Claims 18, 21, 24 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Allowable Subject Matter

5. Claims 18, 21, 24 and 27 are drawn to allowable subject matter, The following is a statement of reasons for the indication of allowable subject matter: The closest prior art of record Haas et al (US 5,679,860 10-1997) teaches (Column 3, lines 20-51) a process for the synthesis of isophorone diamine which employs a shaped, fixed-bed Raney-cobalt catalyst for aminating hydrogenation. The catalyst taught by Haas is

similar to that instantly claimed but differs in that Haas employs pure metal cobalt as a binder and a catalyst that is free of the pure metal is instantly claimed. The instantly claimed process is therefore patentable over Haas, the closest prior art of record.

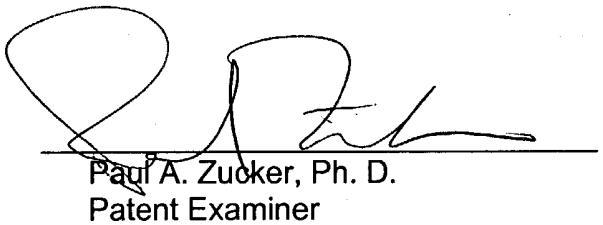
Conclusion

6. Claims 17-35 are pending. Claims 17, 19, 20, 22, 23, 25, 26 and 28-35 are rejected. Claims 18, 21, 24 and 27 are objected to.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Zucker whose telephone number is 571-272-0650. The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul A. Zucker, Ph. D.
Patent Examiner
Technology Center 1600